

Week 4

1. a. $C = 10L + 10K$

b. $MRTS_{LK} = K/L$

c. $L \uparrow$ 時 $K \downarrow$ 時 $MRTS_{LK} \downarrow$, 故等產線凸向

原点。 $\frac{d(K/L)}{dL} = -K L^{-2}$

d. $\begin{cases} \frac{K}{L} = \frac{10}{10} \\ q = 10^{0.5} K^{0.5} \Rightarrow L^* = K^* = 0.19 \end{cases}$

$$MRTS = \frac{K}{L} = \frac{w}{r} = \frac{10}{10}$$

e. $TC = 2q$ $AC = MC = 2$

$$LTC = wL^* + rK^* \\ = 10 \times 0.19 + 10 \times 0.19 = 20$$

f. $TC(10) = 2 \times 10 = 20$

$$AC = 2, MC = 2$$